



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Daniel R. Klemer et al.

Application No.: 10/594,029

Filing Date: September 25, 2006

Title: OPTICAL LIMITER HAVING  
TRIMETALLIC NITRIDE  
ENDOHEDRAL  
METALLOFULLERENE FILMS

) Group Art Unit: Unassigned

) Examiner: Unassigned

) Confirmation No.: Unassigned

SECOND  
INFORMATION DISCLOSURE STATEMENT  
TRANSMITTAL LETTER

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Enclosed is a SECOND Information Disclosure Statement (IDS) and accompanying form PTO-1449 for the above-identified patent application.

- ☒ No additional fee for submission of an IDS is required.
- ☐ The fee of 180 as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e), and the fee of 180 as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- ☐ Charge \_\_\_\_\_ to Deposit Account No. 02-4800 for the fee due.
- ☐ A check in the amount of \_\_\_\_\_ is enclosed for the fee due.
- ☐ Charge \_\_\_\_\_ to credit card for the fee due. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BUCHANAN INGERSOLL AND ROONEY PC

Date April 9, 2007

By: 

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**Buchanan Ingersoll & Rooney PC**  
Attorneys & Government Relations Professionals



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of	)	
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Daniel R. Klemer et al.	)	Group Art Unit: Unassigned
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Application No.: 10/594,029	)	Examiner: Unassigned
	)	
Filed: September 25, 2006	)	Confirmation No.: Unassigned
	)	
For: OPTICAL LIMITER HAVING	)	
TRIMETALLIC NITRIDE	)	
ENDOHEDRAL METALLOFULLERENE	)	
FILMS	)	

**SECOND INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, the accompanying information is being submitted in accordance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed. However, copies of the listed U.S. patents and U.S. patent application publications are not enclosed since it is no longer required according to the July 11, 2003 waiver of the requirement for copies of cited U.S. patents and U.S. patent application publications in national patent applications filed after June 30, 2003 and international applications entering the national stage under 35 U.S.C. § 371 after June 30, 2003.

**U.S. PATENT DOCUMENTS**

1. MILLER et al., U.S. Patent No. 6,471,942 B1, issued on October 29, 2002.
2. DORN et al., U.S. Patent Publication No. 2004/0054151 A1, published on March 18, 2004.
3. ROBINSON, U.S. Patent No. 6,174,780 B1, issued on January 16, 2001.
4. FORREST et al., U.S. Patent Publication No. 2002/0189666 A1, published on December 19, 2002.
5. WHEWELL, U.S. Patent No. 5,269,953, issued on December 14, 1993.
6. KAJIURA et al., U.S. Patent Publication No. 2003/0015414 A1, published on January 23, 2003.
7. TAKIKAWA et al, U.S. Patent Publication No. 2002/0061638 A1, published on May 23, 2002.

8. ANAZAWA et al., U.S. Patent Publication No. 2001/0050219 A1, published on December 13, 2001.

9. ZETTL et al., U.S. Patent No. 6,063,243, issued on May 16, 2000.

10. WANG et al., U.S. Patent Publication No. 2002/0182388 A1, published on December 5, 2002.

#### **NON-PATENT LITERATURE DOCUMENTS**

1. IEZZI, ERICK B. ET AL., "A Symmetric Derivative of the Trimetallic Nitride Endohedral Metallofullerene,  $\text{Sc}_3\text{N@C}_{80}$ ," J.AM.CHEM.SOC., 2002, pp. 524-525, Vol. 124, No. 4, American Chemical Society.

2. KRATSCHMER, W. ET AL., "Solid  $\text{C}_{60}$ : a new form of carbon," NATURE, 9/27/90, pp. 354-358, Vol. 347, Nature Publishing Group.

3. OLMSTEAD, MARILYN M. ET AL., "Isolation and Crystallographic Characterization of  $\text{ErSc}_2\text{N@C}_{80}$ : an Endohedral Fullerene Which Crystallizes with Remarkable Internal Order," J.AM.CHEM.SOC., 2000, pp. 12220-12226, Vol. 122, No. 49, American Chemical Society.

4. STONE, A.J. ET AL., "Theoretical Studies of Icosahedral  $\text{C}_{60}$  and Some Related Species," Chem. Physics Ltrs., 8/8/86, pp. 501-503, Vol. 128, No. 5,6, Elsevier Science Publishers B.V.

5. TRULOVE, "Filled buckyballs - diamonds from soot," article from website <http://www.research.vt.edu/resmag/2002winter/buckyballs.html>, 9 March 2002 (09.03.2002), available at [www.archive.org](http://www.archive.org). (entire document).

6. NAGASE et al., Chapter 9: Endohedral metallofullerenes: theory, electrochemistry, and chemical reactions, of Fullerenes: Chemistry, Physics and Technology (Kadish and Ruoff, eds.), 2000, John Wiley and Sons, pp. 395-429.

7. WILSON et al., "Advanced materials: fluorine fullerenes and nanotubes," *Tetrahedron*, 2002, vol. 58, pp. 4041-4047, Elsevier Science Ltd.

8. SOON et al., "One-dimensional photonic crystal optical limiter", OPTICS EXPRESS, 2003, vol. 58, pp. 2007-2018.

The documents are being submitted within three (3) months of the filing or entry of the national stage of this application or before the first Office Action on the merits, whichever is later. Since these documents are being filed within the time period set forth in 37 C.F.R. § 1.97(b), no fee or statement is required.

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: April 9, 2007

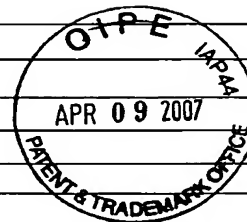
By:

A handwritten signature in black ink, appearing to read "Ch North", is written over a horizontal line.

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Substitute for form 1449/PTO & 1449B/PTO		Complete if Known	
<b>SECOND</b> <b>INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b> (use as many sheets as necessary)		Application Number 10/594,029	Filing Date September 25, 2006
Sheet 1 of 2		First Named Inventor KLEMER et al.	Examiner Name Unassigned
		Attorney Docket No. 1034136-000038	



U.S. PATENT DOCUMENTS				
Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)
	6,471,942	B1	Miller et al.	10-29-2002
	2004/0054151	A1	Dorn et al.	03-18-04
	6,174,780	B1	Robinson	01-16-2001
	2002/0189666	A1	Forest et al.	12-19-2002
	5,269,953		Whewell	12-14-1993
	2003/0015414	A1	Kajiura et al.	01-23-2003
	2002/0061638	A1	Takikawa et al.	05-23-2002
	2001/0050219	A1	Anazawa et al.	12-13-2001
	6,063,243		Zettl et al.	05-16-2000
	2002/0182388	A1	Wang et al.	12-05-2002

FOREIGN PATENT DOCUMENTS										
Examiner Initials	Document Number	Kind Code (if known)		Date of Publication (MM-DD-YYYY)	STATUS					
					Translation	Partial Translation	Eng. Lang. Summary	Search Report	IPER	Abstract

NON-PATENT LITERATURE DOCUMENTS	
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	IEZZI, ERICK B. ET AL., "A Symmetric Derivative of the Trimetallic Nitride Endohedral Metallofullerene, Sc <sub>3</sub> N@C <sub>80</sub> ," J.AM.CHEM.SOC., 2002, pp. 524-525, Vol. 124, No. 4, American Chemical Society
	KRATSCHEMER, W. ET AL., "Solid C <sub>60</sub> : a new form of carbon," NATURE, 9/27/90, pp. 354-358, Vol. 347, Nature Publishing Group
	OLMSTEAD, MARILYN M. ET AL., "Isolation and Crystallographic Characterization of ErSc <sub>2</sub> N@C <sub>80</sub> : an Endohedral Fullerene Which Crystallizes with Remarkable Internal Order," J.SM.VHRM.SOC., 2000, pp. 12220-12226, Vol. 122, No. 49, American Chemical Society
	STONE, A.J. ET AL., "Theoretical Studies of Icosahedral C <sub>60</sub> and Some Related Species," Chem. Physics Ltrs., 8/8/86, pp. 501-503, Vol. 128, No. 5,6, Elsevier Science Publishers B.V.
	TRULOVE, "Filled buckyballs - diamonds from soot," article from website <a href="http://www.research.vt.edu/resmag/2002winter/buckyballs.html">http://www.research.vt.edu/resmag/2002winter/buckyballs.html</a> , 9 March 2002 (09.03.2002), available at <a href="http://www.archive.org">www.archive.org</a> . (entire document).
	NAGASE et al., Chapter 9: Endohedral metallofullerenes: theory, electrochemistry, and chemical reactions, of Fullerenes: Chemistry, Physics and Technology (Kadish and Ruoff, eds.), 2000, John Wiley and Sons, pp. 395-429.
	WILSON et al., "Advanced materials: fluorinated fullerenes and nanotubes," <i>Tetrahedron</i> , 2002, vol. 58, pp. 4041-4047, Elsevier Science Ltd.
	SOON et al., "One-dimensional photonic crystal optical limiter", OPTICS EXPRESS, 2003, vol. 11, No. 17, pp. 2007-2018

Examiner Signature	Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.